

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously presented) A semiconductor device manufacturing method comprising:

forming, by a thermal chemical vapor deposition method, a silicon nitride film on an object disposed in a reaction container, with bis tertiary butyl amino silane and  $\text{NH}_3$  flowing into said reaction container, and

removing silicon nitride formed in said reaction container, with  $\text{NF}_3$  gas flowing into said reaction container, before said silicon nitride formed in said reaction container reaches a thickness of 4,000 Å.

2. (Previously presented) The semiconductor device manufacturing method as recited in claim 1, further comprising said forming said silicon nitride film after said removing said silicon nitride.

3-5. (Canceled)

6. (Previously presented) The semiconductor device manufacturing method as recited in claim 1, wherein

said reaction container is made of quartz and a member made of quartz is used in said reaction container.

7. (Currently amended) The semiconductor device manufacturing method as recited in claim 6 ~~1~~, wherein

said removing said silicon nitride is carried out in a state where a pressure in said reaction container is greater than or equal to 10 Torr.

8. (Previously presented) The semiconductor device manufacturing method as recited in claim 1, further comprising

purging said reaction container using said  $\text{NH}_3$  gas at least one of before and after forming said silicon nitride film.

9-21. (Canceled)

22. (Currently amended) A semiconductor device manufacturing method comprising:

forming, by a thermal chemical vapor deposition method, a silicon nitride film on an object disposed in a reaction container, with bis tertiary butyl amino silane and  $\text{NH}_3$  flowing into said reaction container, and

removing silicon nitride formed in said reaction container, with cleaning  $\text{NF}_3$  gas flowing into said reaction container, before said silicon nitride formed in said reaction container reaches a thickness of 4000 Å ~~and before said silicon nitride formed in said reaction container reaches a thickness that generates particles on said object.~~

23. (Previously presented) The semiconductor device manufacturing method as recited in claim 22, further comprising

said forming said silicon nitride film after said removing said silicon nitride.

24. (Previously presented) The semiconductor device manufacturing method as recited in claim 22, wherein

said reaction container is made of quartz and a member made of quartz is used in said reaction container.

25. (Currently amended) The semiconductor device manufacturing method as recited in claim 24 ~~22~~, wherein

said removing said silicon nitride is carried out in a state where a pressure in said reaction container is greater than or equal to 10 Torr.

26. (Previously presented) The semiconductor device manufacturing method as recited in claim 22, further comprising

purging said reaction container using said  $\text{NH}_3$  gas at least one of before and after said forming said silicon nitride film.

27. (Currently amended) A semiconductor device manufacturing method comprising:

carrying at least one object to be film-formed into a reaction container;

forming, by a thermal chemical vapor deposition method, a silicon nitride film on said object disposed in said reaction container, with bis tertiary butyl amino silane and  $\text{NH}_3$  being provided into said reaction container;

purging said reaction container using said  $\text{NH}_3$  gas after carrying said object into said reaction container and at least one of before and after said forming said silicon nitride film;

carrying said object on which said silicon nitride film has been formed out of said reaction container; and

removing silicon nitride formed in said reaction container after said object has been carried out, with  $\text{NF}_3$  gas being provided into said reaction container before said silicon nitride formed in said reaction container reaches a thickness of 4000 Å.

28. (Previously presented) The semiconductor device manufacturing method as recited in claim 27, further comprising said forming said silicon nitride film after said removing said silicon nitride.

29. (Previously presented) The semiconductor device manufacturing method as recited in claim 27, wherein

said reaction container is made of quartz and a member made of quartz is used in said reaction chamber.

30. (Currently amended) The semiconductor device manufacturing method as recited in claim 29 27, wherein

said removing said silicon nitride is carried out in a state where a pressure in said reaction container is greater than or equal to 10 Torr.

31-35. (Canceled)

36. (New) The semiconductor device manufacturing method as recited in claim 1, wherein said removing said silicon nitride is carried out when said silicon nitride formed in said reaction container reaches a thickness of 3000 Å.

37. (New) The semiconductor device manufacturing method as recited in claim 22, wherein said removing said silicon nitride is carried out when said silicon nitride formed in said reaction container reaches a thickness of 3000 Å.

38. (New) The semiconductor device manufacturing method as recited in claim 27, wherein said removing said silicon nitride is carried out when said silicon nitride formed in said reaction container reaches a thickness of 3000 Å.